

Date: Wednesday, 3/8/2006 10:38:52 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BLOWER ADAPTER FLANGE
Job Number	: 26131		
Estimate Number	: 12310		
P.O. Number	: N/A	Part Number	: D34775
This Issue	: 3/8/2006	S.O. No.	: N/A
Prsht Rev.	: NC	Drawing Number	: D3477 REV A
First Issue	: N/A	Project Number	: N/A
Previous Run	: N/A	Drawing Revision	: A
	Type : PURCHASED PARTS	Material	: N/A
Written By	: SEE COMMENT BELOW	Due Date	: 3/31/2006
Checked & Approved By	: 06.03.08	Qty:	Um: Each
Comment	: Est Rev:A New Issue 06-03-03 JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	PG	PURCHASING
-----	----	------------



Comment: Issue P/O: 00000768 06/03/09
 E-mail or Ship DXF file to vendor
 Laser cut flat pattern as per Dwg D3477
 Possible supplier: Ind. Laser
 Material release note is required.

2.0	D34775F	BLOWER ADAPTER FLANGE FLAT PATTERN
-----	---------	------------------------------------



Comment: Qty.: 1.0000 sf(s)/Unit Total : 6.0000 sf(s)
 FLANGE PLATE

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
 Receive & Inspect For Transit Damage
 Ensure material certification is attached

06.03.22

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

06.03.22

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Deburr if necessary.

2-Form as per Dwg D3477 using Dt8858 A,B&C

06.03.22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06/03/02	5	One Slot pattern kept as template	JB	06.03.02	1	JB 06/03/02	JB 06/03/02
		ADD Inspection LEVEL 21	EE	06.04.03			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes (No) DQA: PP Date: 06/03/02
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 3/8/2006 10:38:52 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLOWER ADAPTER FLANGE

Job Number: 26131

Part Number: D34775

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB

06/03/30

9

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

0603-29

⑨

Inspection Level 21

06/03/30

⑨

Job Completion



06.03.30

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector


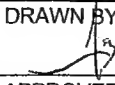
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

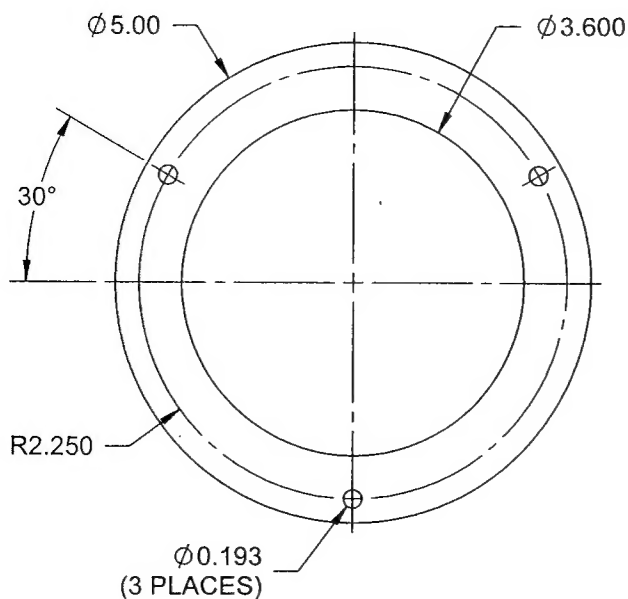
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

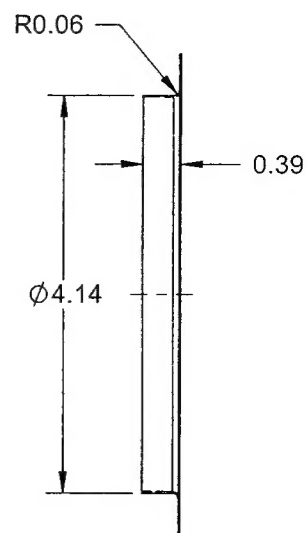
NOTE: Date & initial all entries

PRELIMINARY ISSUE

DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3477	REV. A SHEET 4 OF 4
DATE 05.12.09		TITLE BLOWER INLET ADAPTER	SCALE 1:2



D3477-5F FLAT PATTERN



**D3477-5 BLOWER
ADAPTER FLANGE**

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH
26 GAUGE SS (0.018 THICK)
(REF. DART SPEC. M304S26GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010

3/17/06

604-946-4153 ATTN: PETE

03/17/2006 14:36 FAX 604 946 4153
03/17/2006 14:16 FAX 6042729137INDUSTRIAL LASER CUTTING
INTEGRIS METALS002
001/004

3/17/2006 1:57 PAGE 001/002 Fax Server


Ryerson

T-726 P. 007/016 F-597

253-286-9888

FROM-INTEGRIS

MAY-17-2006 16:05

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812		Page 1											
				Lead No. 7410672 SER No. 7410672											
INTEGRIS METALS PO BOX 340 MINNEAPOLIS, MN 55440	INTEGRIS METALS 306 'B' STREET ALBUQUERQUE, WA 98001	MILL ORDER NO. 772185-0191 PROCESSOR ORDER NO. 427135-01 BUYER'S ORDER NO. 427135-01		PART NO. 74151497 ENG. UNIT - PRODUCT - METRIC UNIT DIMENSION 48.000 X COIL											
SKID ID	PIECE	HEAT	PARENT COIL ID	NET WEIGHT											
SKD713143	1	7280151	0549919-01	345 LBS. 402 KG.											
SKD713144	1	7280151	0549919-01	347 LBS. 403 KG.											
SKD713145	1	7280151	0549919-01	345 LBS. 400 KG.											
SKD713149	1	7280151	0549919-01	344 LBS. 392 KG.											
TOTAL SKIDS	TOTAL PIECES			TOTAL NET WEIGHT											
4	4			1340 LBS. 1507 KG.											
L-Label Analysis of Heat P-Product Analysis of Parent Coil CHEMICAL ANALYSIS															
ID	C	MN	P	S	SI	CR	NI	MO	N	CU	CO				
L 7280151	.049	1.39	.027	.001	.35	18.18	8.05	.35	.04	.30	.12				
SHIPPING DATE: 03/13/2005 REMARKS: NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.						PRODUCT DESCRIPTION CR SET TYPE 304 STAINLESS #2B FINISH SLIT EDGE * AMS 8512 * ALL TECH REQ'S HAVE BEEN MET UNLESS NOTED TO OR NOTED OTHERWISE * A SYN A 240 -04 EX PARA 3.1.1.9 ELONG WILL BE DETERMINED BY ASTM E 8 * ASTM A 490 -01 EX PARA 19.1.1 ELONG WILL BE DETERMINED BY ASTM H & S EX PARA 28.1.1.3 COIL WILL BE TAGGED ON OUTSIDE ONLY * ASTM A 866 -03 * IN-011 Rev 0, * IN-011 0 * BUYER PART# 74251497 * ASME SA-240 SECTION II PART B (2001 ED. 2002 ADDENDA) EX PARA 3.1.1.9 ELONG WILL BE DETERMINED BY ASTM E 8 * EX-10204 3.1.1.9									
PARENT COIL ID	FOR (REV)	DIR (L, T, D)	COND	%ELONG 2 INCH MEASURED	TENSILE STRENGTH (KSI)	YS. %OFTSET (KSI)	ROCKWELL HARDNESS T _{all}	ROCKWELL HARDNESS F _{ront}							
0549919-02	T	T	ASTM	71.0	105.2	57.1	72	74							
*** CONTINUED ON NEXT PAGE ***															

Ryerson

3/17/2006 1:57

PAGE 002/002

Fax Server

MAY-17-2006 16:05

FROM-INTEGRIS

253-268-8833

T-726 P.008/015 F-537



AK Steel Corporation
Metallurgical Test Report
Construction Works
Coshocton, OH 43812

Page 2

Lot# No. 7410672
 BRN No. 7410672

ROLL ORDER NO. 427136-01 PROCESSOR ORDER NO. 427136-01
 PART NO. 7421067

INTEGRIS METALS
 PO BOX 380
 MINNEAPOLIS, MN 55440

INTEGRIS METALS
 305 "B" STREET
 AUBURN, WA 98001

ENGLISH UNITS - PRODUCT - METRIC UNITS
 3711061 44600 X COIL

PARENT COIL	POS	DIR	COND	ASTM	BEND	TENSILE	Y.T.	ROCKWELL	ROCKWELL
ID	(W/D)	(L, T, D)		A 362	180	2 INCH	25 OFFSET	HARDNESS	HARDNESS
059919-02	T		ASTM	PASS	17				
PARENT COIL	POS	DIR	COND	%ELONG		STRENGTH			
ID	(W/D)	(L, T, D)		MEASURED	(KSI)	(KSI)			
059919-02	F	T	ASTM	71.0	92.8	33.1	B	72	8
PARENT COIL	POS	DIR	COND	BEND					
ID	(W/D)	(L, T, D)		17					
059919-02	F		ASTM	PASS					

THIS CERTIFIED ANALYSIS REPORT HAS BEEN OBTAINED TO A CUSTOMER OF MATERIAL PURCHASED FROM AK
 Steel Corporation. TO AVOID THE POSSIBILITY OF MISUSE OR DELAY OF THE REPORT, A
 REPORT MUST BE RECEIVED BY AND UNDER THE NAME OF SUCH CUSTOMER.

AK Steel Division

MAY 2006 17:05

THIS CERTIFIED ANALYSIS REPORT HAS BEEN OBTAINED TO A CUSTOMER OF MATERIAL PURCHASED FROM AK
 Steel Corporation. TO AVOID THE POSSIBILITY OF MISUSE OR DELAY OF THE REPORT, A
 REPORT MUST BE RECEIVED BY AND UNDER THE NAME OF SUCH CUSTOMER.

WELD

Chris Ryerson
 ANALYST/ENGINEER

DATE 05/19/2006 TIME 10:01 AM

MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 1
Heat/Lot : 86K9
TIN : B42748

Sold To: INTEGRIS METALS, LTD.
7910 40TH STREET SE
CALGARY, AB T2C2Y3

Ship To: ***CUSTOMER PICKUP***
4375 14TH STREET NORTHEAST
CALGARY
ABT3E7A9

Vendor Information

Cust PO #: 416824

Cust PO DT: 11/03/05

Specifications

STAINLESS STEEL SHEET, COLD ROLLED, ANNEALED AND PICKLED.
ASTMA240/04a 480/04a, 666/03, ASMESA240/04-A05, 480/04-A05, SA666/04
Q08766D-A X 1/8 FRM, AMS5513H X MRK&FIN, MIL5059D, AMD3, X CRWN MRAS
CORROSION: ASTM A262/02aE; 180Bend-OK
Buyer Part: 4288441
304 2B .1305 IN 48 IN 96 IN
Country of Origin: UNITED STATES

Mechanical Tests

		UOM	L	O		UOM	L	O
Yield Strength - 0.2% Offset	40	KSI	F	TRANSV				
Tensile Strength (UTS)	93.3	KSI	F	TRANSV				
Rockwell B	85		F	TRANSV				
Pct Uniform Elong 2 In/50mm	57.01	PCT	F	TRANSV				
Rockwell A	85		T	TRANSV				

Chemical Composition

C Carbon-Pct	.059	CR Chromium-Pct	18.360
CU Copper-Pct	.342	MN Manganese-Pct	1.643
MO Molybdenum-Pct	.285	N Nitrogen-Pct	.037
NI Nickel-Pct	8.150	P Phosphorus-Pct	.029
SI Silicon-Pct	.289		

Comments

MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 2
Heat/Lot : 86K8
TIN : B42748

Material free from mercury contamination. No weld repairs.
EN 10204 3.1 PED 97/23/EC Annex1, Para. 4.3 Q08763F Cond A
This document certifies the material has been tested in
accordance with applicable specifications described herein
and has met those requirements.

QA by ERIC HESS 02/01/2006

Miscellaneous Data

GUELPH, ONT. K123
Control #: 50C60214
Part #: 74270441
.135 X .48 X .96

Date: 03/17/06

SOLD TO: INDIAN LAKE

TO 110880

S/O 90-374786 - 02

Eric Hess 3/17/06

The Chemical Analysis and Mechanical Test
data was received via EDI from the above
mentioned vendor.

INTEGRIS METALS, LTD.